

Case Study: Less Waste Challenge, Regulated Medical Waste (RMW) Reduction**Summary**

Critical access hospitals such as the 6-bed Vidant Bertie and the 49-bed Vidant Chowan can make significant improvements in waste reduction despite the relatively small volumes of waste they generate. By installing a recycling dumpster at Bertie and compactors at Chowan, EVS Manager Lizbeth White has seen a 34 percent decrease in cost of solid waste removal at one hospital and 63 percent volume reduction at another. Key waste reduction programs include replacing desk-side trash cans with recycling bins, 96 percent polystyrene elimination, and recycling 67 percent of operating room (OR) waste. Small hospitals can be more conducive to experimenting with different initiatives, but face the challenge of spreading their ideas to the health system as a whole and scaling up their environmental and economic benefits.

Waste Reduction Strides at Two Critical Access Hospitals

The Problem

There is great potential for health care facilities to save money while reducing environmental harm by evaluating and managing their waste streams. Practice Greenhealth estimates that hospitals and health systems produce an astounding 5.9 million tons of waste per year, or 33 pounds per staffed bed every day.ⁱ Hospitals across the country have responded to lowering their environmental footprint by committing to reduce waste. In 2012, 149 Practice Greenhealth award winning hospitals prevented 64,800 tons of waste from entering landfills or incinerators and saved \$16.8 million by recycling alone.ⁱⁱ

The various waste streams within a hospital are challenging to manage. Quantifying solid waste, regulated medical waste, recyclables, hazardous waste, universal waste, and construction/demolition waste streams within a hospital is critical to addressing waste reduction.ⁱⁱⁱ Due to the relatively small amount of waste generated at small critical access facilities, it is often cost-prohibitive to adopt the latest waste reduction technologies, such as in-house paper shredding. However, small facilities can more easily track waste streams and expense and they can test reduction strategies on a small scale.

Strategy & Implementation

Vidant Chowan started with a wastebasket overhaul in 2009 as its first waste-reduction effort. Following executive approval for White's proposal, all desk-side trash cans were replaced with a mesh recycling bins. Employees take non-recyclables items to a centrally located lined bin. The switch cost under \$1,000 to implement and saves \$9,000 annually on trashcan liners. The hospital president, Jeff Sackrison, announced he would take the first mesh bin and on-going executive support is instrumental to the program's success.

In late 2011 Vidant Chowan replaced six, eight cubic yard dumpsters with a solid waste compactor and a recycling compactor. The construction project cost \$120,000, but a history of costly dumpster-related, OSHA-reportable injuries influenced the decision to proceed. The financial case was strengthened by the projected 16 percent savings for waste disposal and recycling expense and the recommendation of the Environment of Care (EOC) committee to address safety. Actual FY 2013 savings for solid waste and recycling expense was 34 percent and the hospital diverted 25.4 tons from the landfill.

About Vidant Health

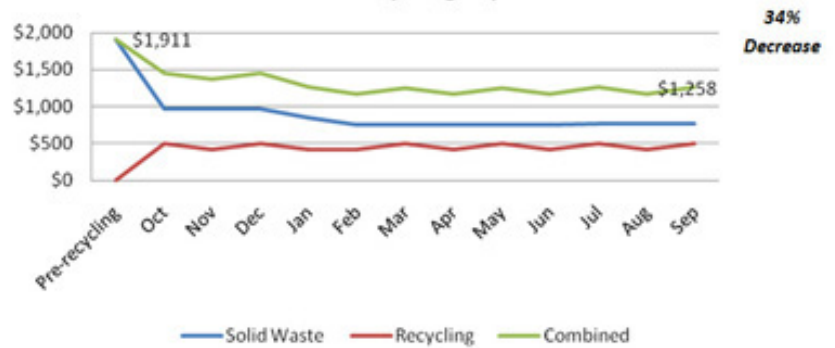
Vidant Health is a non-profit hospital system in eastern North Carolina with just under 12,000 employees across one main hospital and nine community hospitals.

Vidant Bertie Hospital is a 6-bed, 50,000-square-foot medical/surgical facility and rural clinic that is the first in the nation to be built according to Critical Access Hospital standards.

Vidant Chowan Hospital in Edenton, North Carolina is twenty-three miles east of Vidant Bertie and is a 112,000-square-foot critical access hospital with 49 general hospital beds.

The heart of critical access hospitals is quality, and Vidant Chowan has been named a top performer for quality care by The Joint Commission. Lizbeth White is the EVS manager for both facilities and a leader in finding cost savings related to waste reduction at Vidant Health. Vidant Bertie and Vidant Chowan both earned the Practice Greenhealth Partner for Change award in 2013. Vidant Chowan was recently named one of the nation's 50 greenest hospitals by Becker's Hospital Review.

FY 2013 VCHO
Solid Waste & Recycling Expense



Vidant Bertie is located in a rural county that owns a revenue-producing landfill and does not offer pick-up for single-stream recycling. Until June 2012, all Vidant Bertie's solid waste, including cardboard, went to the landfill. Six months after the hospital contracted for a 40 cubic yard recycling container, expecting to incur additional expense for rent and hauling fees, Vidant Bertie eliminated 50 percent of its dumpsters and reduced its weekly hauls by 25 percent for a 63 percent reduction in landfill waste by volume and diverted an estimate weight of 13 tons. The combined cost for solid waste and recycling was reduced by seven percent.

In FY 2012 Director of Support Services and Green Council's executive sponsor, Matt Gitzinger, obtained corporate approval to open a budget for Green Council. The purpose was to bring the expenses from all waste streams under one umbrella. Previously data on weight, volume and expense was difficult to track and manage, because different waste stream expenses resided in different budgets, such as Environmental Services, Plant Operations, Materials Management, Information Services and Health Information Management Services. Now the expenses for most waste and recycling streams come out of the Green Council budget and waste statistics per adjusted patient day (APD) are included with the monthly EOC reports.

Vidant Chowan Hospital Waste Stream Data FY 2013														
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Solid Waste Acct# 71014	Exp	\$961	\$961	\$961	\$844	\$749	\$749	\$749	\$749	\$749	\$763	\$759	\$763	\$9,755
	Wgt	25707	21540	18676	22100	15171	22100	19270	24400	14920	19020	19085	16955	238944
	Lbs/APD	13.57	14.14	12.21	14.42	10.38	13.49	12.50	15.22	10.57	12.69	11.88	10.72	12.70
	Exp/APD	\$0.51	\$0.63	\$0.63	\$0.55	\$0.51	\$0.46	\$0.49	\$0.47	\$0.53	\$0.51	\$0.47	\$0.48	\$0.52
Recycling Acct# 71125	Exp	\$494	\$414	\$494	\$414	\$414	\$494	\$414	\$494	\$414	\$494	\$414	\$494	\$5,454
	Wgt	7840	7742	7742	8240	5400	5400	6590	6590	6940	6940	0	8000	50752
	Lbs/APD	4.14	0.00	5.06	0.00	5.64	3.30	0.00	4.11	0.00	4.63	0.00	5.06	2.70
	Exp/APD	\$0.26	\$0.27	\$0.32	\$0.27	\$0.28	\$0.30	\$0.27	\$0.31	\$0.29	\$0.33	\$0.26	\$0.31	\$0.29
RMW Acct#71025	Exp	\$870	\$601	\$781	\$768	\$690	\$514	\$1,001	\$707	\$764	\$927	\$712	\$881	\$9,216
	Wgt	3122	2135	2782	2758	2471	1845	3580	2540	2755	3337	2566	3058	32940
	Lbs/APD	1.65	1.40	1.82	1.80	1.69	1.13	2.32	1.58	1.95	2.23	1.59	1.93	1.75
	Exp/APD	\$0.46	\$0.39	\$0.51	\$0.50	\$0.47	\$0.31	\$0.65	\$0.44	\$0.54	\$0.62	\$0.44	\$0.56	\$0.49
*Pharma & Haz Waste Acct# 71025	Exp	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28
	*Wgt	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Exp/APD													0.05
	APD	1894	1523	1529	1533	1461	1638	1541	1603	1411	1499	1607	1582	18821

The Green Council informs administrators and managers of the council's work during monthly management meetings and provides quarterly reports to the hospital's board of directors. In September 2013, White and Gitzinger made a presentation to Vidant Health's corporate executive council. As a result, White is assisting three additional hospitals with their waste reduction programs and the monthly reporting tool is being used in two other Vidant Health hospitals.

Green Council eliminated 96 percent of all polystyrene in the hospital food services, even though polystyrene alternatives cost \$6,000 more a year. The hospital is making way for long-term environmental benefits, by offsetting that expense with a \$6,953 annual savings in fuel expense, by adding a Prius to the fleet.

The operating rooms at both hospitals started reprocessing single-use devices (SUDs) in FY 2013. The surgical department at Vidant Bertie has a vigorous Greening the OR program. Employees weigh all the waste generated by the department and continually test different methods of waste reduction. Thanks to the leadership of clinical champion Wanda Lilley, RN, CNOR, the Vidant Bertie OR recycles, reuses or donates 67 percent of all "waste."

Both hospitals' have waste reduction activities that are reported in the Community Benefit Inventory for Social Accountability (CBISA) report required by the U.S. Internal Revenue Service (IRS) for non-profit hospitals. The value of items segregated from the waste stream and donated to other non-profits, the paid labor to collect, manage and transport it and the use of equipment and storage are all reportable. It also earns community recognition for the environmental efforts of the hospitals.

Benefits

1. Thirty-four percent reduction in solid waste disposal expense at Vidant Chowan; 25.4 tons diverted from landfill.
2. Sixty-three percent volume waste reduction at Vidant Bertie, estimate 13.1 tons diverted from landfill.
3. Community Benefits: actual value of donations of goods for recycling or re-use and in-kind services to collect, manage and transport them are CBISA-reportable and help validate non-profit status to IRS.
4. Recycling and waste management programs have been implemented in two more Vidant Health hospitals.

Structure

The Green Council has had great success in waste reduction efforts and now White wants to expand the scope of waste reduction to include water and energy

consumption, local food purchasing, composting, transportation and EPP. At the annual Green Council retreat, members will vote on an initiative to rename itself the “Sustainability Council” in hopes of expanding awareness of the vast opportunities for affordably lessening our negative impact on the environment. There are already “green teams” working in these areas, while White works to expand these programs to other Vidant Health hospitals.

White cites two difficult aspects of waste reduction: 1) “trickling up” and 2) getting the right people to the table. A prime example is managing electronic waste, which requires a multi-disciplinary team including health information services, information technology, corporate compliance, risk management, materials management and a sustainability coordinator. White stresses the need for an e-waste management plan that begins at purchase, not end-of-life, stating “if we had a systemized effort among all our hospitals, we could manage e-waste as a commodity.”^{iv}

North Carolina’s decision to not expand Medicaid based on the Affordable Care Act has stimulated hospitals in the state to cut extraneous costs as much as possible. Additionally the state legislature attempted to revoke the tax-exempt status for non-profits and is expected to take up the measure again in 2014. The current economic climate is a motivating factor for health systems such as Vidant Health to scrutinize its waste spending and White understands the economic argument is more effective than the environmental argument to gain buy-in for sustainable changes.

As small hospitals, Vidant Bertie and Vidant Chowan have the unique opportunity to be the pioneers in piloting programs for the health system, and are proving that even critical access hospitals have the ability to dramatically shift behavior to realize economic and environmental benefits.

Endnotes

- i. <http://hospitalization/hhi-challenges/less-waste>
- ii. https://practicegreenhealth.org/sites/default/files/upload-files/2012susbenchreport_09052012.pdf
- iii. Defining Waste & Material Streams Accompanies Less Waste Challenge
- iv. Personal Communication